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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,211	02/10/2005	Kaoru Usui	050053	6407
23850 7590 12/05/2007 KRATZ, QUINTOS & HANSON, LLP 1420 K Street, N.W. Suite 400 WASHINGTON, DC 20005				
EXAMINER				
YAGER, JAMES C				
ART UNIT		PAPER NUMBER		
4145				
MAIL DATE		DELIVERY MODE		
12/05/2007		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/524,211

Applicant(s)

USUI ET AL.

Examiner

Jim Yager

Art Unit

4145

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/DE)
Paper No(s)/Mail Date 20070227 & 20050318
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "Heating Pad With Adhesive".

Claim Objections

2. Claims 1-5 are objected to because of the following informalities: Claim 1 recites "...a adhesive portion formed by comprising, as a main component..." The phrase "formed by comprising" is not clear. The claim language could be clarified by replacing "formed by comprising" with "comprising".

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase "such as" in line 5 renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 1, the phrase "is allowed" in line 11 renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1, 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Usui (US 5,046,479) in view of Munro (US 2002/0037270).

Regarding claims 1, 2 and 5, Usui discloses a heat-generating body, comprising a heat-generating portion formed by sealing a heat-generating composition causing an exothermic reaction in the presence of air (col 2, ln 23-35) in an air-permeable container in desired form such as bag form or sheet form (col 2, ln 35-36) and an adhesive portion (col 2, ln 35-40) to enable the heat-generating body to be attached to skin (col 1, ln 10-11).

Usui does not disclose the adhesive portion comprising, as a main component, a water-containing hydrophilic gel agent obtained from a hydrophilic polymeric thickening

agent, wherein an organic filling agent is added in the water-containing hydrophilic gel agent in the adhesive portion.

Munro discloses a body for attaching to skin ([0004]) comprising an improved adhesive portion formed by comprising, as a main component, a water-containing hydrophilic gel agent obtained from a hydrophilic polymeric thickening agent (see [0050]-[0054], which discloses that hydrogels based on interpenetrating polymer networks (IPN) are defined as a combination of two polymers, for example monomer 1 polymerized and crosslinked to give a polymer which is then swollen with monomer 2. Suitable water soluble polymers for the formation of semi-IPN's include polyvinyl alcohol). Munro also discloses that the adhesive possesses superior adhesion characteristics ([0004]) and is more resistant to bacteria and molds ([0007]). Additionally, Munro discloses said adhesive comprising an organic filling agent in the water containing hydrophilic gel agent in the adhesive portion ([0039], citric acid).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the hydrogel adhesive disclosed by Munro as the adhesive in the heat-generating body of Usui, since Munro's hydrogel adhesive possesses superior adhesive and microorganism resistant qualities since Usui is in the same field of endeavor as Munro et al. (adhering an apparatus to the skin of a person).

While modified Usui does not disclose the critical moisture value of the adhesive portion to be plus or minus 5% of the critical moisture value of the heat generating portion, said critical moisture value of the adhesive portion does not confer patentability

to the claim. The examiner notes that, even though modified Usui does not disclose the critical moisture value of the heat-generating portion, the heat-generating portion of Usui will inherently have a critical moisture value. Therefore, since the instant specification is silent to unexpected results, and because the adhesiveness and microbial resistance of the adhesive portion are variables that can be modified by adjusting the critical moisture value of the adhesive portion (see Munro, [0004] and [0007]) the precise critical moisture value of the adhesive portion would have been considered a result effective variable by one having ordinary skill in the art at the time the invention was made. As such, without showing unexpected results, the claimed critical moisture value of the adhesive portion cannot be considered critical. Accordingly, one of ordinary skill in the art at the time the invention was made would have optimized, by routine experimentation, the critical moisture value of the adhesive portion in modified Usui to obtain the desired critical moisture value (In re Boesch, 617 F.2d. 272, 205 USPQ 215 (CCPA 1980)), since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. (In re Aller, 105 USPQ 223). Said optimum critical moisture values of the adhesive portion include values allowing the difference between the critical moisture value of the adhesive and the critical moisture value of the heat-generating portion to be 5% or less.

8. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Usui (US 5,046,479) in view of Munro (US 2002/0037270) as applied to claims 1 and 2 above, and further in view of Otsuka et al. (US 2001/0010847).

Regarding claims 3 and 4, modified Usui discloses all the claim limitations as set forth above. Usui further discloses that the heat-generating body is contained in an air-tight container bag (col 1, In 16-20, wrapped, hermetically sealed bag). Additionally, Usui discloses that the adhesive portion is attached to the heat-generating portion (col 2, In 32-37), but does not explicitly disclose how they are attached. Otsuka discloses a heat-generating body comprising a heat-generating portion and an adhesive portion ([0050]) wherein the adhesive portion is laminated on the heat generating portion ([0061]-[0062], stacked laminate).

As Usui is not limited to any specific examples of attachment and as laminating adhesives to heat-generating bodies is well known in the art at the time the invention was made, as evidenced by Otsuka, and further, as the instant specification is silent to unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to laminate the adhesive onto the heat-generating portion as in the heat-generating body of Otsuka. Said combination would amount to use of a known attachment method for its intended use in a known environment to accomplish entirely expected result.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jim Yager whose telephone number is 571 270-3880. The examiner can normally be reached on Mon - Thurs, 7:30am-5pm, EST, Alt. Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Basia Ridley can be reached on 571 272-1453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY
November 19, 2007

/Basia Ridley/
Supervisory Patent Examiner, Art Unit 4145